



Plastic peril: Evidence of choked gut of Sambar (*Rusa unicolor*) due to intake of plastic in Ranthambore National Park, Rajasthan, India

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Plastic is one of the best inventions of humankind but unrestrained use puts it under the category of great threats to nature and humans themselves. Plastic has multiple uses and with cheap production cost, it captures the major packaging sectors which require covering or wrapping their product in cheap durable material. The real problem starts when single-use



Figure 1. Chinkara (*Gazella bennettii*) in dried bush of *Prosopis juliflora* at Ranthambore National park boundary (05/07/2018) © Soufil Malek

plastic comes into play with a lack of proper disposing guidelines, policies and infrastructures worldwide (Derraik, 2002). Plastic will remain as such for ages and will poison nature as no biological entity is able to break it down into simple compounds (Ganguly 2018). Before anyone knows and understands it starts affecting nature in hazardous ways. Every

year millions of birds, fishes and marine animals became the primary target and got killed so terrestrial animals too got caught in this plastic wave (Susanti et al. 2020). Over half of the world's Sea Turtles are found with plastic waste in their stomachs. Cows can be seen consuming the plastic from urban dumpsters but the same is happening with wild herbivore species which inhabit the human-dominated rural landscapes near the wildlife sanctuaries and national parks. The Indian boar (*Sus scrofa cristatus*), nilgai (*Boselaphus tragocamelus*), chinkara (*Gazella bennettii*) (Menon 2014) and other herbivore animals are facing great dangers due to unmanaged plastic wastes which are dumped nearby fellow lands and forest areas. The single-use polythene bags are entangled with each other in the stomach of the animal and capture the stomach cavity which reduces the digestive space for the animal (Wabnitz & Nichols 2010). Plastic can cause choking of the digestive tract of animals



(Bjorndal 1994). Additionally, polythene also releases toxic chemicals which weaken animal health (Hammer 2012). I also witness the same misshape with animals during my field days.

I was lucky enough to get a chance to work in the famous tiger territory of Ranthambore National park, Rajasthan during the tiger cycle 2017-19. Ranthambore national park with an area of 329.50 km² is home to 239 Vertebrate species, from which 31 are Mammalian species (ZSI 2010). As a research biologist of “All India tiger estimation exercise”, we got good accessibility to tourist and non-tourist areas of the national park to complete the research work. It was the fifth day of a fiery afternoon of the month of June, 2018; we were roaming at the boundary areas of the national park to select the proper location to place our camera traps. This boundary of the park is full of invasive thorny shrub *Prosopis juliflora* or “Vilayati babul” (Dayal 2007), so we are unable to get proper shade and are irritated from the scorching heat of midsummer. Our driver Kalubhai drives slowly on forest paths and we suddenly smell a strong rotten smell which fires up the team. I and my fellow researcher Ravi instantly decide to locate this carcass in the hope to see a large carnivore as it may be on potential kill. We saw two carcasses, one is fresh and another one looks a little old, maybe a couple of days old from a safe distance through



Figure 2. Photographs of dead Sambar (*Rusa unicolor*) with plastic material (05/07/2018) © Soufil Malek

the dense bush. We wait for almost ten to twenty minutes before reaching near to it to collect samples.

Our excitement instantly replaced with despondent when we reached the scene of this “potential kill site”. The murder of crows was feasting on two carcasses of the “Sambar deer” (*Rusa unicolor*) (Menon 2014). We caught ourselves in shock and fell in agony for the animal. The half-eaten half-rotten animal gut was full of single-use plastic bags. It took the shape of a stomach. The other dead animal does not have any hunting marks on it so we are sure that it was not a kill of any carnivore species. When we visit that location again after a



week we find the same type of plastic inside animal gut as it was eaten by other small carnivores and crows. The area was at the boundary of the national park and a village. We came to know that they use forest boundaries as a dumping site and as these animals generally roam around the village primacies' and consume the plastics with garbage. The single-use plastic is proved as a menace again and again for domestic and wild animals as well. As a human, we all are held responsible for not working in the direction of reducing such incidence. A balanced combination of social awareness to villagers and proper policy implementation is the key to protecting our animals from eating and dying unnatural death.

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